# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

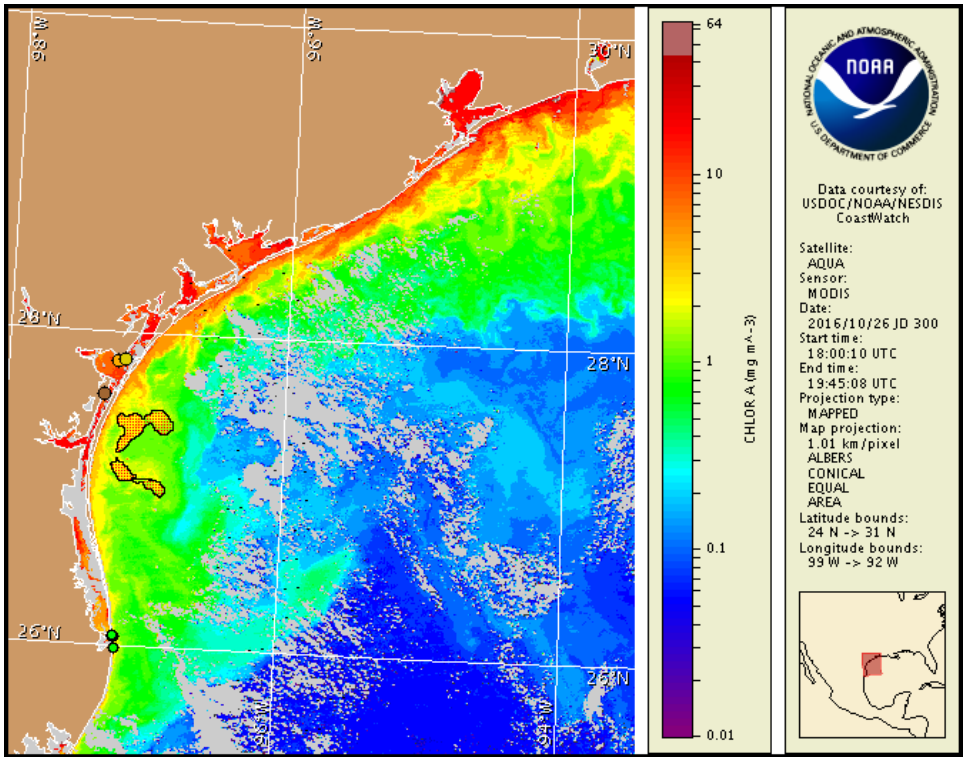
Thursday, 27 October 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 24, 2016




Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 17 to 26: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml

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To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

http://tidesandcurrents.noaa.gov/hab/bulletins.html

## Conditions Report

*Karenia brevis* (commonly known as Texas red tide) ranges from not present to medium concentrations along the Texas coast in the Aransas Pass to Padre Island National Seashore regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, October 27 through Monday, October 31 is listed below:

**County Region**: Forecast (Duration)
**Bay region-Corpus Christi Bay**: Low (Th-M)
**Bay region-Upper Laguna Madre**: Low (Th-M)
**Aransas Pass to PINS**: Low (Th-M)
**Padre Island National Seashore region**: Low (Th-M)
**All Other Texas Regions**: None expected (Th-M)

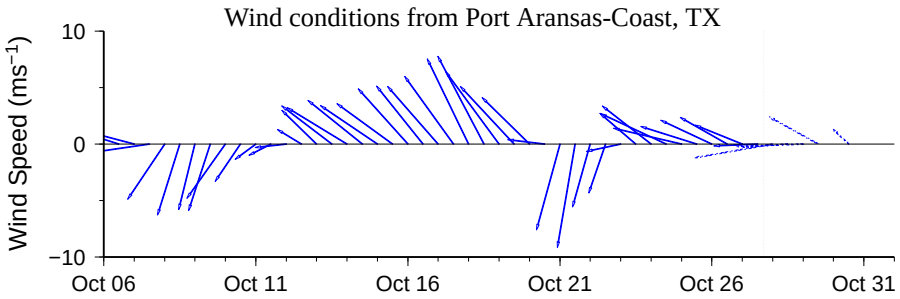
Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations.

## Analysis

*Karenia brevis* concentrations range between 'not present' and 'medium' along the Texas coast from Aransas Pass to the Padre Island National Seashore, with the highest concentrations in Corpus Christi Bay (TPWD; 10/17-26). In Corpus Christi Bay, recent sampling indicates 'background' *K. brevis* concentrations (TPWD; 10/26). In the Aransas Pass to Padre Island National Seashore (PINS) region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates *K. brevis* concentrations have decreased to 'very low b' from 'low a' (TAMU; 10/24-27). No new samples have been received in the Upper Laguna Madre region and there have been no new reports of discolored water and dead fish which were reported in the region last week (TPWD; 10/26). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at: http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

In recent ensemble imagery (MODIS Aqua, 10/26), patches of elevated to very high chlorophyll (2 to >20 $\mu$g/L) with the optical characteristics of *K. brevis* are visible along- and offshore from Sabine Pass to the Matagorda Peninsula region, but elevated chlorophyll in this region is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast. Patches of elevated chlorophyll (2-8 $\mu$g/L) with the optical characteristics of *K. brevis* are visible along- and offshore the Mustang Island region to approximately PINS Mile Marker #10 and offshore south of PINS Mile Marker #10 to approximately 30 miles offshore Land Cut.

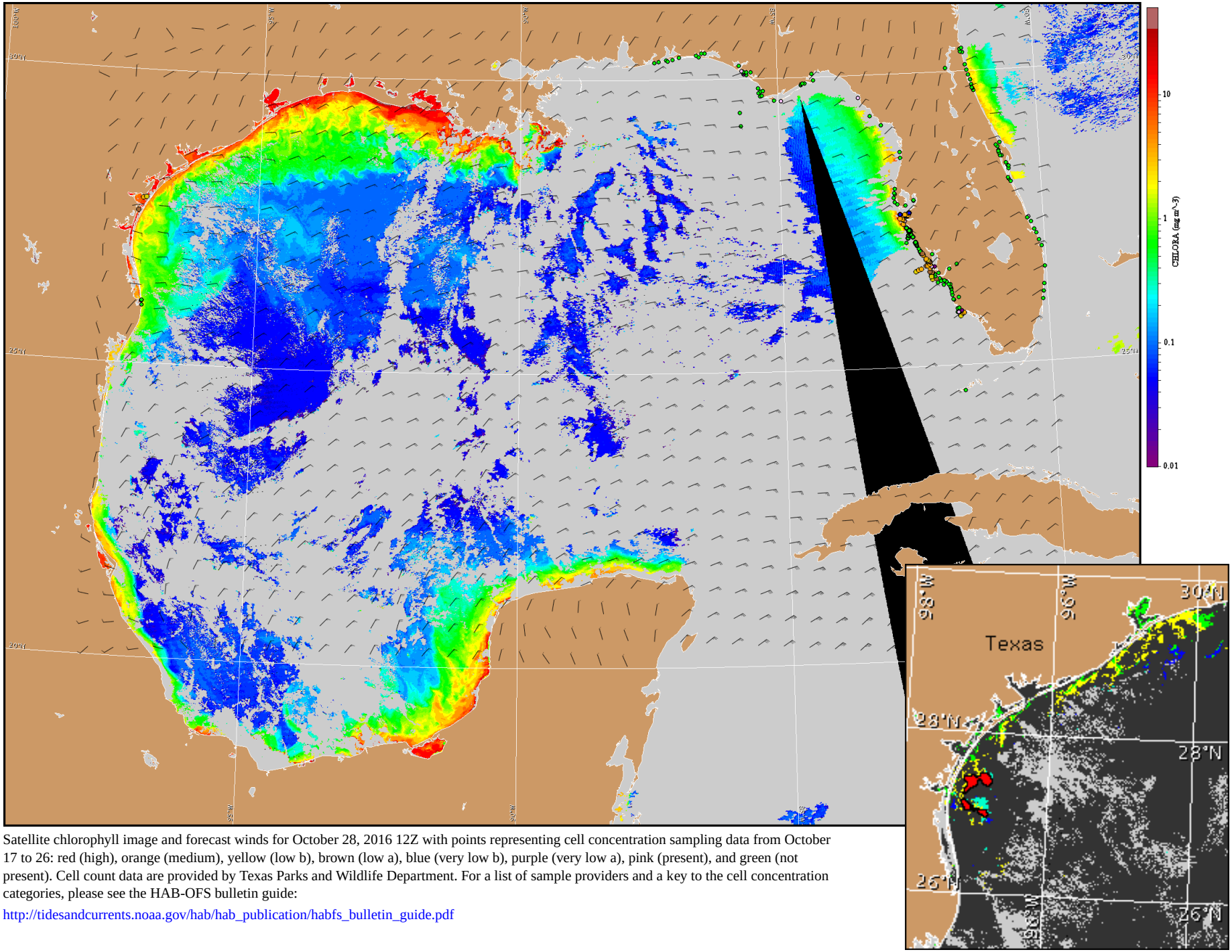
Forecast models based on predicted near-surface currents indicate a maximum transport of 145 km south from the Port Aransas region and 125 km south from PINS Mile Marker #15 from October 26-30. -Davis, Kavanaugh




Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

# Wind Analysis

**Baffin Bay to Port Aransas**: Northeast winds (10-15kn 5-8m/s) today becoming east winds (10-15kn) tonight through Saturday. Southeast to east winds (5-10kn, 3-5m/s) Saturday night through Monday.




Satellite chlorophyll image and forecast winds for October 28, 2016 12Z with points representing cell concentration sampling data from October 17 to 26: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).